July 2017

THE FUTURE OF WATTLE

The Monthly Dirt
a monthly newsletter on the California Construction General Permit
by WGR Southwest, Inc.

Did you ever own one of these things? I did. I remember really wanting to get one because everybody else (who was cool) had one. Do you still see anyone sporting their Walkman on a jog or trip around the mall? Uh … no. Some things can stand the test of time, other things were just a passing fad. How about BMPs? When it comes to erosion and sediment control, is it time to get rid of the tried and true for newer and better products? Or are these old favorites more than a fad but are an enduring control measure at constructions sites? In this edition, the Monthly Dirt attempts to answer these questions for perhaps the most iconic BMP of the past two decades. ***What is the future of straw wattle?***

Does it Work? We have all seen instances where wattle (or fiber roll) was installed incorrectly and failed miserably. We laugh about the so-called "*miracle wattle*", where the installer flings it out on the dirt and tells it to "*do your thing*". Either this person has incredible faith in the ability of the product; has been greatly mis-informed about the way it works; or, more likely than not, doesn't really care how it works but is just checking off the BMP box on his/her checklist. We know from experience that wattle incorrectly installed will look like this:

But, does wattle work when it is properly installed? To answer this question we set up a demonstration in our Construction Sandbox. We installed a section of wattle on a 25% slope. The installation was per CASQA / Caltrans specs, keyed in 2 – 3 inches deep, and staked. We then subjected the wattle to heavy "storm events" of 2" and more than 6" and watched for failure points. **We were surprised by the results.**

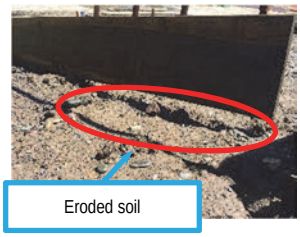
We were thinking that the wattle would become overwhelmed with water. We thought surely the ground would become saturated and give way underneath the wattle or there would be a waterfall flowing over the wattle. None of that happened.

Test Results: The wattle caputured a significant amount of sediment from the otherwise unprotected slope but was not overcome or compromised. But what we did not expect to see was the wattle actually encouraging infiltration of storm water above it. Relatively little water flowed beyond the wattle. Of course, this is a function of the type of soil (ours being a clayey sand). Water also did not flow through the wattle. It acted as a mini dam.

Lessons Learned: By getting up close and personal with this test and section of wattle we learned a few things.

1. *The whole reason wattle works is that it is keyed-in and staked down, giving it very good conformity to the soil beneath it. Without this, the wattle would have failed and significant erosion would have occurred below the wattle.*

2. *We observed that wattle used as a linear break can handle a significant amount of precipitation.*
3. *Wattle does not stop sheet erosion. A significant amount of sheet erosion occurred on the otherwise unprotected slope. We had up to two inches of soil eroded (as shown by the daylight below the divider board) due to only sheet erosion. But properly installed wattle does stop rill erosion. No rills formed downstream of the wattle. This demonstrates the importance of using wattle with an erosion "blanket" to impede rain drop and sheet erosion.*



4. *Since wattle promotes infiltration, in situations like unstable slopes susceptible to sliding, wattle would not be the preferred erosion control tool. It may be better to use a compost sock which allows flow to pass through it and on down the stabilized hillside.*

So, don't send your wattle to the same place your Walkman went. Keep it in your BMP toolbox. It will continue to be a viable tool far into the future. - MD

It's Just a Rumor

For some time now, we have been hearing from several sources that the days of wattle with synthetic netting would be coming to an end – at least in California. The talk on the street was that it would be prohibited in the next renewal of the Construction General Permit. This month **The Monthly Dirt** spoke with Russell Hansen of the State Water Board who is working on drafting the permit renewal. Russell stated that he has not seen anything banning synthetics in the proposed permit language which is expected to be released in 2018.

Caltrans does not allow wattle with synthetic netting …

STANDARD SPECIFICATIONS

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

21-2.02P Fiber Rolls

Fiber roll must be a pre-manufactured roll filled with rice or wheat straw, wood excelsior, or coconut fiber. Fiber roll **must be covered** with biodegradable jute, sisal, or coir fiber netting secured tightly at each end and must be one of the following:
1. 8 to 10 inches in diameter and at least 1.1 lb./ft.
2. 10 to 12 inches in diameter and at least 3 lb./ft.

Fiber roll must have a minimum functional longevity of 1 year.

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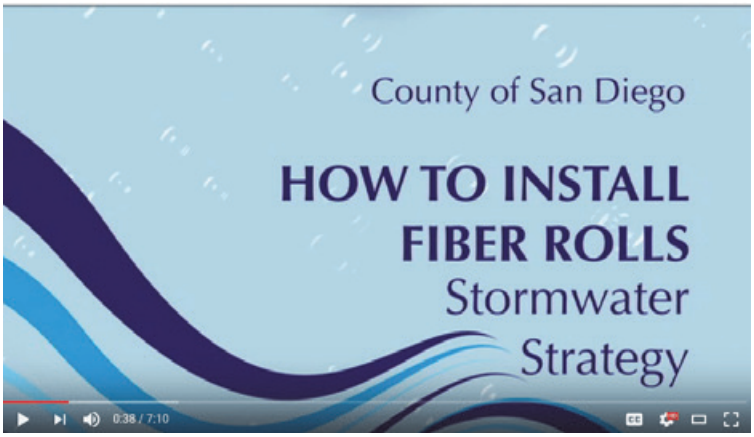
Upcoming Training

- ✓ On-line SPPP Writing Course **(new PDUs!)**
  - o Visit www.pduweek.org for more info
- ✓ QSP/QSD Training in Lodi, CA, **August 8 - 10, 2017**
  - o Sign up at www.gotswppp.com
- ✓ Storm Water Awareness Week, **October 9 - 13, 2017**

(For more information about these classes, please email jteravskis@wgr-sw.com)

Wattle Tutorial

Check out this Video on How to Install Wattle
https://www.youtube.com/watch?v=X1x9ver8zbo



Not just for Sediment Control …

*As reported on the www.treehugger.com website, a design farm in Lake Forest, Illinois constructed an amphitheater with **straw wattles** to be used as a temporary performance space.*

*And you can listen to **Straw Wattles**, that is the blue grass band:*
https://www.youtube.com/watch?v=3TQWT07jdKA

Please contact us if you have any questions …

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www.stormwaterawareness.org

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PRODUCT SPOTLIGHT

The Hornet's Nest Drain Inlet Filter is a unique, under-grate storm drain filter, perfect for locations looking for basic drain protection with a clean appearance. The oversized base allows the filter to be used with many different sizes and shapes of drain inlets. Simply insert the filter, replace the grate, and trim the excess material for a custom fit and clean appearance. The yellow webbing secures the filter to the grate and doubles as lifting straps allowing for quick and easy removal of the filter and grate. The sediment collection cone has four overflow portals to ease congestion during heavy storm events.

Product Specifications:
- Material: 8-ounce non-woven geotextile
- Strapping: Weather resistant 2" polypropylene webbing
- Flow Rate: 90 GPM/foot
- Dimensions: 48" x 36"

BMP
bmpoutlet.com

BMP Outlet is a supply house for affordable erosion control products, drain inlet protection, sorbents, spill containment, and field instruments.

We have a large inventory of many different types of product, and can order whatever you need for your project.

Elima-Drip Pads

Eliminate drips underneath your vehicles and equipment with Elima-Drip drip containment pads. Elima-Drip pads are weighted absorbent pouches contained in heavy-duty vinyl sleeves, which protect the spill pads from accidental movement. The 50"x20" pad is capable of containing up to 50 ounces of oil, and the 30"x20" pad can contain up to 29 ounces. Best of all, these pads are reusable! Simply replace the pouch inside the vinyl sleeve.

Product Specifications:
Outside Material: Heavy-duty vinyl sleeve
Spill Containment Media: Absorbent pads
Dimensions: 50″x20″ or 30″x20″

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